GYNECOLOGY

UNDER THE CHARGE OF

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Escape of Foreign Bodies into the Perineal Cavity through the Uterus in Attempted Criminal Abortion.—Two interesting cases of this character, both of which recovered after operation, are reported by Beckman (*Ann. de gynéc. et d'obst.*, 1916, xlii, 206). The first patient was a young woman, aged twenty-seven years, who had had two previous full-term pregnancies. Having gone somewhat overtime she went to a midwife, who introduced a laminaria tent. Subsequent to this she began to have abdominal pains, followed in a few days by increasing hemorrhage. On admission to the hospital her general condition was good, the abdomen soft, but she was bleeding freely. On examination a silk thread was found issuing from the cervix; this was easily pulled out, but did not bring the tent with it. The cervix was then dilated and the uterus curetted, without finding any foreign body or evidence of perforation. The next day signs of peritonitis became manifest, and the abdomen was opened under general anesthesia. Immediately a large quantity of malodorous pus escaped; the laminaria was found lying among the coils of intestine, which latter were dilated, congested, and in places covered with exudate. There was a quantity of pus and blood in Douglas's pouch. The uterus and adnexa were removed, the vaginal mucosa sutured to the peritoneum, and a gauze drain passed from the pelvis through the vagina, with a second drain through the lower angle of the abdominal incision. After a somewhat stormy convalescence the patient recovered. On examination of the extirpated uterus a perforation large enough to admit a lead pencil was found on the anterior surface just above the peritoneal reflection. The second case was a woman, aged thirty-six years, who had passed through eight normal pregnancies. Her menses failing to appear at the termination of her last lactation she feared another pregnancy, and introduced a bougie 30 cm. in length into her uterus. This was accomplished by placing one knee on a bed beside which she was standing; with one hand she then located the cervix, and with the other introduced the instrument as far as possible, when suddenly it escaped from her grasp and disappeared. She remained quiet the rest of that day, but the next morning began to have pains, and on the fourth day presented herself at the hospital. At this time the abdomen was tender, uterus small, cervix closed, and on examination a foreign body, evidently the bougie, could be felt in the anterior cul-de-sac. Immediate laparotomy disclosed the bougie covered by inflammatory omentum; the intestines were inflamed and lightly adherent. The point of perforation of the uterus was found near the right cornu. The uterus was removed without the adnexa; a drain was placed in the vagina and another in the abdominal wound. Save for slight fever the first few days the convalescence was normal. On examination, no trace of pregnancy was found in the uterus. Beckman thinks that in all cases of this character operation should be performed as soon as the diagnosis is made, and usually by the abdominal route, so that any intestinal injuries may be attended to. He does not think it necessary always to remove the uterus unless this is obviously infected and endangering the patient's life. In other cases, removal of the foreign body and simple suture of the uterine perforation may be entirely sufficient. If the foreign body is encysted in Douglas's pouch posterior colpotomy may be employed in place of laparotomy, the uterus in such cases usually being preserved, though if it is necessary to remove it this may be done by the vaginal route.

Syphilis in its Relation to Gynecology.—The symposium upon this subject which formed an important part of the program of the last meeting of the American Gynecological Society has apparently directed the attention of gynecologists to this heretofore much neglected subject to a very considerable extent. One of the comprehensive papers at this symposium, dealing with the pathologic changes produced by syphilis in the female generative organs, was considered in this department a few months ago. A brief report on the clinical frequency and importance of syphilis as observed in the gynecologic and obstetric services of the University of Michigan was presented by PETERSON (*Surg., Gynec. and Obst.*, 1916, xxiii, 280). The Wassermann test was made upon 390 gynecologic patients, and of these 22 gave sufficiently positive reactions to be judged luetic, amounting to about 5½ per cent. of the total amount examined. While this is possibly a rather low average in comparison to that found in other hospitals over the country, the value of the routine examinations is shown by the fact that only 5 of the 22 positive cases gave a definite history of syphilis, with one additional suggestive history. In Peterson's opinion, the value of these tests cannot be overestimated, since if they are not employed, local conditions may be treated surgically or by other local methods, while the far more important general disease is overlooked. It is undoubtedly true that the diagnosis of syphilis from physical findings alone is far more difficult in women than in men, because the local manifestation are much less marked. Many of the cases that in the past have been puzzles to gynecologists because of their failure to yield to local or surgical measures have undoubtedly been of this type, and will clear up when the true nature of the condition is realized and appropriate therapy instituted. A condition which in the past has been almost completely ignored by gynecologists and obstetricians, which may at times constitute an important element in the symptom-complex presented by their patients, namely *syphilitic fever*, was considered by TAUSSIG (*Surg., Gynec. and Obst.*, 1916, xxiii, 274). He divides this into that occurring as secondary, late secondary, and tertiary syphilitic fever. The secondary precedes or is coincident with the outbreak of the rash. This is believed to occur in about 20 per cent. of all syphilitics, but the rise is not over 1 or 2 degrees and the duration three or four days, so that it often escapes notice. Occasionally, however, the fever is quite high and persistent. Late secondary syphilitic fever is less frequent and more difficult of diagnosis; Taussig reports having seen two cases of this type, both occurring postpartum. In both these women there was persistent high temperature which could not be satisfactorily accounted for, but which disappeared promptly upon the institution of specific treatment. Both patients gave evidences of a syphilitic infection. Tertiary syphilitic fever is still less frequent in occurrence, but is of greater diagnostic importance, since evidences of lues are generally absent and the symptoms may have been forgotten by the patient. The fever is usually continuous, and is attended with an elevation of temperature to 102° or 103°. The cases of this condition of interest to the gynecologist may be subdivided into those in which tertiary syphilis of the genital tract caused the fever, and those in which a gynecologic or obstetric condition was complicated by syphilis in other organs producing fever. Of the former, Taussig has encountered only one definite case, since the gummatous lesions occurring about the external genitals of women and in the rectum apparently do not give rise to this fever. It is the deep-seated lesions, such as those in the liver and osseous system that more often produce it. In several cases of uterine syphilis with extensive gummatous infiltration of the parametrium, however, there was a temperature that could hardly be explained except on the basis of the syphilis, so that the author would class these as suspicious cases of tertiary syphilitic fever. Two instances of the second type are cited; in one of these the lesion was apparently in the liver and spleen, and the other in the bones. In the former salvarsan was given with sudden and complete cessation of the fever and disappearance of the enlargement of the liver and spleen which had been present; in the latter a hysterectomy had been performed, with a secondary laparotomy in an attempt to clear up the cause of the persistent temperature, when the occurrence of pains in the limbs suggested a syphilitic periostitis. Antiluetic treatment resulted in immediate cessation of fever, a gain of eighteen pounds in weight, and disappearance of the bone symptoms.

Regurgitant Menstruation through the Fallopian Tubes.—A rather remarkable example of this condition is reported by Child (*Am. Jour. Obst.*, 1916, lxxiv, 484). The patient was twenty-nine years of age, and had been married for three months. The history, obtained only subsequent to operation, was that in order to prevent conception she had had an "antipregnancy button" inserted in the cervix by a physician, who had instructed her to return to him each month just before the onset of menstruation to have the button removed. This precaution, however, she had neglected, and the button was worn through three periods, during which the flow was scanty, and was accompanied with severe pain, such as she had never had before. The pain became worse and finally continuous, and the button was then removed, but without relief. On examination the pelvis was tender, with fulness in the cul-de-sac. A posterior colpotomy revealed free blood in the peritoneal cavity; upon opening the abdomen the uterus was found to be normal, but the pelvis contained a large amount of thick, dark blood with a few soft clots. Both tubes were normal except for a slight enlargement; their distal ends when drawn up out of the exudate were found to be perfectly free, and the fimbriæ not adherent. From the lumen of both tubes the same dark, sticky blood as filled the pelvis could be squeezed. The canal in each tube seemed to be very much larger than normal, however, as it was possible to introduce a large filiform bougie. The material found in the pelvis was of the same general appearance as that usually met with in cases of retained menstruation due to atresia of the vagina. It showed no tendency to adhere to the peritoneum or viscera, but could be sponged away perfectly clean. Careful search failed to show any traces of a small ruptured ectopic, nor did the character of the hemorrhage suggest this condition. The uterus was not distended, but this could easily be accounted for by the fact that the button had been removed for some time, and if it had been distended, it had had time to return to normal size. After removal of the exudate the patient made an uneventful convalescence; the pain was entirely relieved, and menstruation has since been normal.

HYGIENE AND PUBLIC HEALTH

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An Outbreak of Anthrax Conveyed by Infected Shaving Brushes.— R. R. Elworthy, (*Lancet*, January 1, 1916) reports three cases of anthrax were definitely proved to be caused by infected shaving brushes. Of these, two, the D case and the B case, survived the disease while one, the W—P— case was fatal. Clinically, the W—P— case was an example of so-called erysipeloid anthrax, which is characterized by the insignificance or deferred appearance of pustules, rapidly spreading edema and a high mortality. It is usually seen in the neck or eyelids where the tissue is loose and cellular. Having proved the identity of the bacillus by culture and inoculation, an attempt was made to decide how the infection came about. The man's occupation in no way suggested anthrax. At the postmortem examination it was noted that the original area of infection came within the individual's shaving area. This suggested the idea that a new shaving brush might have been the cause of the infection after a small wound had been made by the razor edge. It was found that the man had been using a new razor for about a fortnight. This brush was obtained for examination and was found to be of poor quality, made of animal fiber, pig bristles horse-hair and cows' tails with a small amount of vegetable fiber. The brush was "lathered" with 20 to 30 c.c. of sterile broth made alkaline to phenolphthalein with 5 per cent. sodium hydrate. The washings were heated at 80° C. for fifteen minutes, centrifuged and the deposit collected in broth and distributed through three agar plates. Colonies which proved to be B. anthracis on subculture and inoculation grew. Some of the deposit was injected into a rabbit which died in three days from typical anthrax, and when this rabbit's blood was inoculated into a guinea-pig the latter died. In order to meet the objection that the infection of the brush was due to contact with an abraded anthrax lesion, unused brushes were examined, and out of the nine examined eight showed infection by B. anthracis on inoculation into guinea-pigs and six showed colonies of this organism on agar plates. A brush from the same manufacturer which had been used in the D case by a man who had contracted facial anthrax, was examined, but it was found that it had been thoroughly cleansed after use, which had probably removed the spores. However, when the ends of the hair, set inside the handle, were examined, they were proved to be infected by inoculating an animal with washings from them. The animal inoculated died in eight days from anthrax. Samples of the so-called "goat-hair" and hog-bristles which were used in the manufacture of these brushes were obtained. Nothing was found in the hog-bristles, but plates made from the washings of the goat-hairs were covered with colonies, half of which were anthrax. The animals inoculated with these washings died in thirty-nine hours from a mixed infection, cultures from the blood and spleen giving a few anthrax colonies. In an attempt to find the source of the hair infection, 30 pediculi found in a guinea-pig dead of anthrax were planted on the surface of an agar plate and 2 gave rise to colonies of anthrax. The last 2 brushes examined were associated with the B case, in which the patient was a youth, aged twenty-one years, who developed a malignant pustule on the back of the neck. A guinea-pig injected with the washings from the brush, died on the sixth day from anthrax. Since the lesion was on the back of the neck, it was thought that the infection was carried by the fingers or face-cloth. Another case of anthrax due to infection by a shaving brush is reported by E. H. Snell and E. W. G. Masterman in the *Lancet*, January 29, 1916. The clinical symptoms were characteristic of anthrax infection and smears of blood from around the pustule which developed showed anthrax bacilli as did smears from the spleen-pulp. No connection between the disease and his occupation or home-surroundings could be found. As the deceased had recently purchased a new shaving brush, it was thought that this might be the source of the infection. An examination was, therefore, made of the brush and anthrax spores found in it. Some of the brushes of the same make were purchased, and out of these, two were found to contain virulent anthrax spores.

The Physical Chemistry of Disinfection.—NORTON and HSU (*Jour. Infect. Dis.*, 1916, p. 180) in the first of a series of articles on the mechanism of disinfection studied from a physicochemical standpoint, record studies on the action of the hydrogen ion obtained from formic acid and the effect of neutral salts and of sodium formate on the rate of disinfection of B. typhosus by the hydrogen ion. This rate is shown to be proportional to the hydrogen ion, and is greatly increased by the presence of salts such as sodium chloride and sodium nitrate, but is decreased on the addition of sodium or ammonium formate to the acid. This latter action is due to the change in ionization produced, as shown by the fact that when isohydric mixtures of formate and acid are used, the rate of disinfection is increased in the same manner as with neutral salts. The conclusions from this study are that hydrogen ions are intimately concerned in acid disinfection, that salts act as catalyzers to increase the rate of action except where the salt and acid have a common anion, in which case there is a resultant effect due to the positive catalysis of the anion and the negative catalysis of the undissociated acid molecules.

Responsibility for Typhoid Fever.—In the case of Vennen vs. New Dells Lumber Company (*Public Health Reports*, vol. xxxi, No. 6, February 11, 1916) 154 N. W. Rep. 640 (October 26, 1915), the Supreme Court of Wisconsin decided that the death of an employee caused by typhoid fever which was contracted by drinking impure water furnished by the employer was the result of an "accident" under the terms of the Workmen's Compensation Law, and that the employer was liable.

Preventives of Typhoid Fever.—Methods for the Destruction of Body Lice.—GALEWSKY (*Deutsch. med. Wchnschr.*, May 27, 1915) gives an account of certain experiments for the destruction of lice found on the persons of Russian prisoners, and describes in some detail the measures adopted to stamp out typhus fever among such prisoners. In order that large bodies of troops might be quickly handled, large factories, such as sugar factories, were converted into stations for disinfecting soldiers and their clothing—some of these buildings being large enough to cope with from 12,000 to 15,000 prisoners and their clothing every day. The prisoners are first thoroughly washed with soap and water, while their clothing is being disinfected by steaming, with the exception of leather articles, which are subjected to dry heat. Galewsky made experiments to determine the most satisfactory method for the destruction of lice in buildings occupied by Russian prisoners nearly all of whom were infected by insects. All the cracks and corners were first washed with a 3 per cent. solution of cresol soap and were then plastered up. The clothing was hung loosely on lines in the building, with the exception of a bundle of shirts, which, for experimental purposes, was tied into a firm bundle. 25 kilos of sulphur were burned in the building, special sulphur stoves being used for the purpose. After three hours, the doors and windows were opened, and two hours later the building was occupied by the prisoners, who in the meantime had been bathed. It was found that the lice and eggs were completely destroyed except inside the parcel of shirts. Further experiments by Schlesinger showed that lice and their eggs were killed in two hours by sulphur dioxid vapors, but that it took two and a half hours or more for formaldehyde vapors to effect the same purpose. Dry heat was found to be effective in the destruction of lice and their eggs in one and a half hours, provided the articles to be disinfected were not closely packed. The general conclusion was that sulphur dioxid vapor is the cheapest and simplest, as well as the most reliable for the destruction of lice and their eggs in fomites and buildings.